712CD

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PRESENTED IN:

WORKING GROUP:	#22 (Analytic Support to Training); #33 (Warfighting Experimentation)	**DEMONSTRATION:**	
COMPOSITE GROUP:		**POSTER:**	
SPECIAL SESSION 1:		**TUTORIAL:**	
SPECIAL SESSION 2:		**OTHER:**	
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Use of a Common Assessment Methodology in Support of Joint Training, Capability Development, and Experimentation

US Joint Forces Command
Joint Fires Integration and Interoperability Team (JFIIT)
Joel.Parker@eglin.af.mil

AGENDA

- Domain & Mission
- Model
- Capability
- Scope
- Requirement
- Common Framework
- Universal Joint Tasks
- Way Ahead

Domain & Mission

Joint fires definition - fires produced during the employment of forces from two or more components in coordinated action toward a common objective.

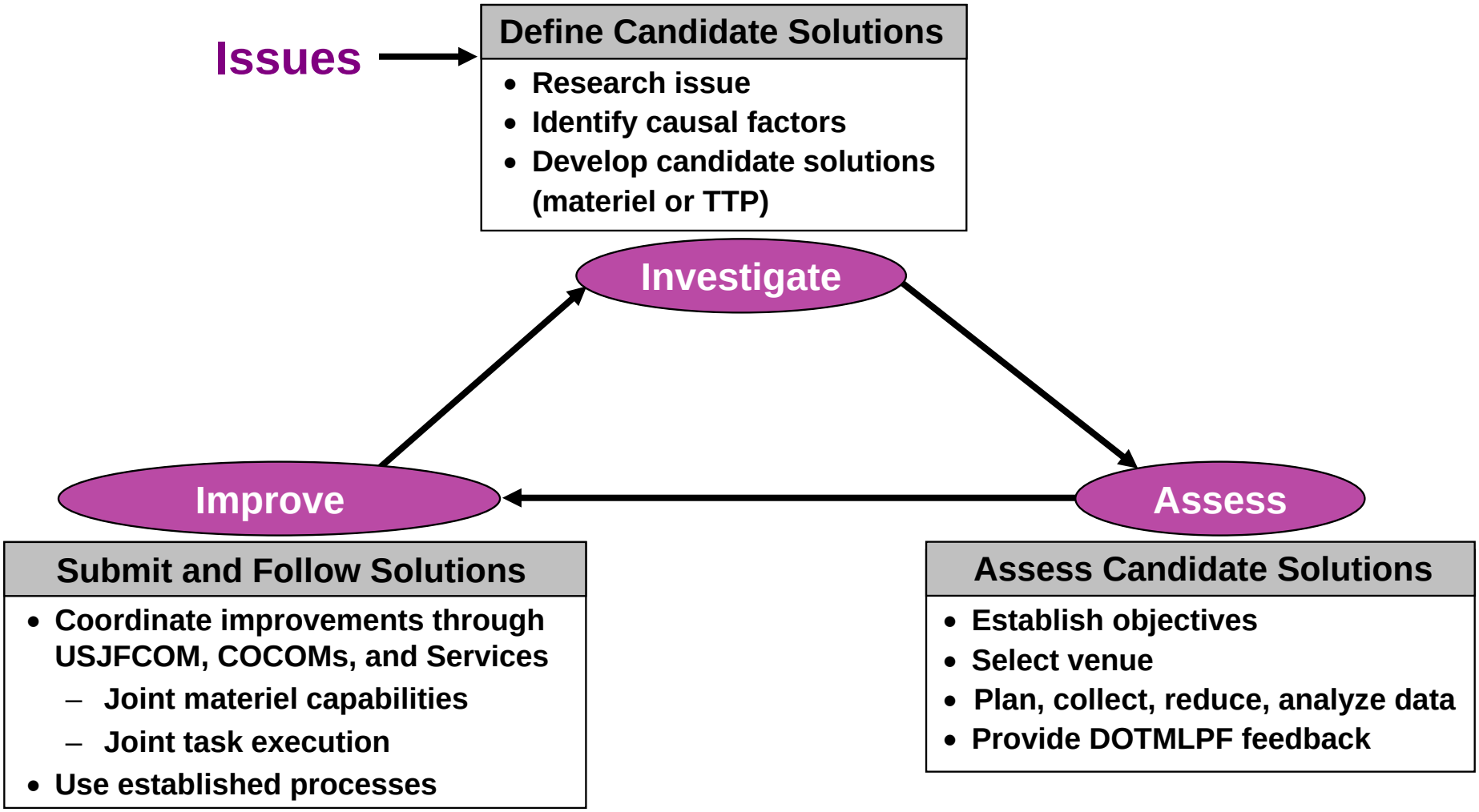
Joint Publication 3-0

Observation *– this occurs down to the foxhole across the range of military operations*

JFIIT Mission

Improve the integration, interoperability, and effectiveness of Joint fires, focused at the tactical level.

Model
JFIIT Assessment



COCOM	Combatant Command
DOTMLPF	Doctrine, Organization, Training, Materiel, Leadership, Personnel, and Facilities
JISR	Joint Intelligence, Surveillance, and Reconnaissance
TTP	Tactics, Techniques, and Procedures

CAPABILITY

JFIIT Team

- Personnel
  - Active uniformed 35
  - Reserve component 0
  - DOD civilian 6
  - Contractors 89
- Facilities
  - Eglin AFB, FL
  - Fort Irwin, CA

C2	Command and Control
FIST	Fire Support Team
FO	Forward Observer
FSCC	Fire Support Coordination Center
ISR	Intelligence, Surveillance, and Reconnaissance
JFO	Joint Fires Observer
JTAC	Joint Terminal Attack Controller
TACP	Tactical Air Control Party

JFIIT Core Strengths

- Operational Joint fires expertise
  - Air to ground, ground to ground, air defense
  - Ground maneuver
  - Special operations
  - TACP/FSCC, JTAC/JFO, FO/FIST
  - Electronic warfare
  - Weapon system and data link
  - C2 and ISR
  - Observer/trainer
- Analytical capabilities
  - Tactical capability analysis
  - Joint task execution; training assessment
  - Joint interoperability expertise
  - Forte in live field exercise assessments
- Technical skills
  - Instrumentation
  - Networking and communications
  - Data collection, management, processing
- Additional exercise expertise
  - Scenario planning, range integration, and airspace management

Scope

- Conduct range of JFCOM assessments
  - ✓ Training (J7)
  - ✓ Capability development (J8)
  - ✓ Experimentation (J9)
- JFIIT assessment categories
  - ✓ **Joint task execution** - improve fires related joint context and execution of joint tasks
  - ✓ **Joint material capabilities** – improve fires with emphasis on current and emergent capabilities (i.e. TTP and system)
- Do so with assigned resources
- Do so within existing events
  - ✓ Always in a joint environment
  - ✓ When possible, in a training domain

Requirement

- **Range of assessments drive the JFIIT organization to generate efficiencies in**
  - ✓ Assessment design, planning, and data requirements
  - ✓ Packaging of findings, conclusions & recommendations

- **What's needed is a common framework to provide structure in the various assessment domains**

Common Framework

- Employ Universal Joint Tasks (UJT) as framework for structure
  - ✓ Review UJT in CJCSM 3500.04D, 15 Sept 2006
  - ✓ Posted to Joint Doctrine, Education and Training Electronic Information System (JDEIS) Web Portal, https://jdeis.js.mil/jdeis/
  - ✓ Managed for CJCS by Joint Staff J-7
- UJT provides common
  - Attributes to populate assessment templates (plan and report) in the form of language & graphics based on joint doctrine & TTP
- UJT facilitates
  - ✓ Construction of joint mission, training & test threads
  - ✓ Knowledge transfer across broad range of DoD audiences

Universal Joint Tasks

- **Common attributes**
  - ✓ Current
    - Task description
    - Measures of effectiveness (only representative)
    - Doctrine (references and elements)
    - Conditions
  - ✓ Future
    - Architecture
    - Joint Task Articles (Enhanced version)

- **Architectures are IAW DoD Architecture Framework (DoDAF)**
  - ✓ Operational Views
  - ✓ Systems Views

Way Ahead

- Work through OPRs for joint task development
  - ✓ Refine UJT attributes
  - ✓ Refine and reorganize doctrine
  - ✓ Post to JDEIS portal
- Accumulate metrics
  - ✓ Measures of Effectiveness
  - ✓ Measures of Performance
  - ✓ Data elements
- Build database linking fires related joint tasks to above metrics (internal to JFIIT)

OPR - Office of Primary Responsibility
JDEIS - Joint Doctrine Electronic Information System

Way Ahead - continued

- Start with below joint fire support tasks; then expand to address larger joint fires task set
  - ✓ TA 3.2.1, Conduct Joint Fire [Support]
  - ✓ TA 3.2.2, Conduct CAS
  - ✓ TA 2, Share Intelligence
  - ✓ TA 3.3, Coordinate Battlespace Maneuver and Integrate With Firepower
  - ✓ TA 5, Exercise C2
  - ✓ TA 6.5, Provide for Combat ID
  - ✓ TA 5.2.1, Establish, Operate and Maintain Baseline Information Exchange

- Offices of Primary Responsibility
  - ✓ Joint Tasks & Doctrine – JS-J7 (JFCOM OPR is J7/JNTC & J7/JT-10)
  - ✓ Architectures – TBD (JFCOM OPR, J89)

BACKUP SLIDES

Following slides from initial work on joint fire support task set

Universal Joint Task Application

Following slides walk us through

TA 3.2.2

Provide CAS

TA 3.2.2 Conduct CLOSE AIR SUPPORT

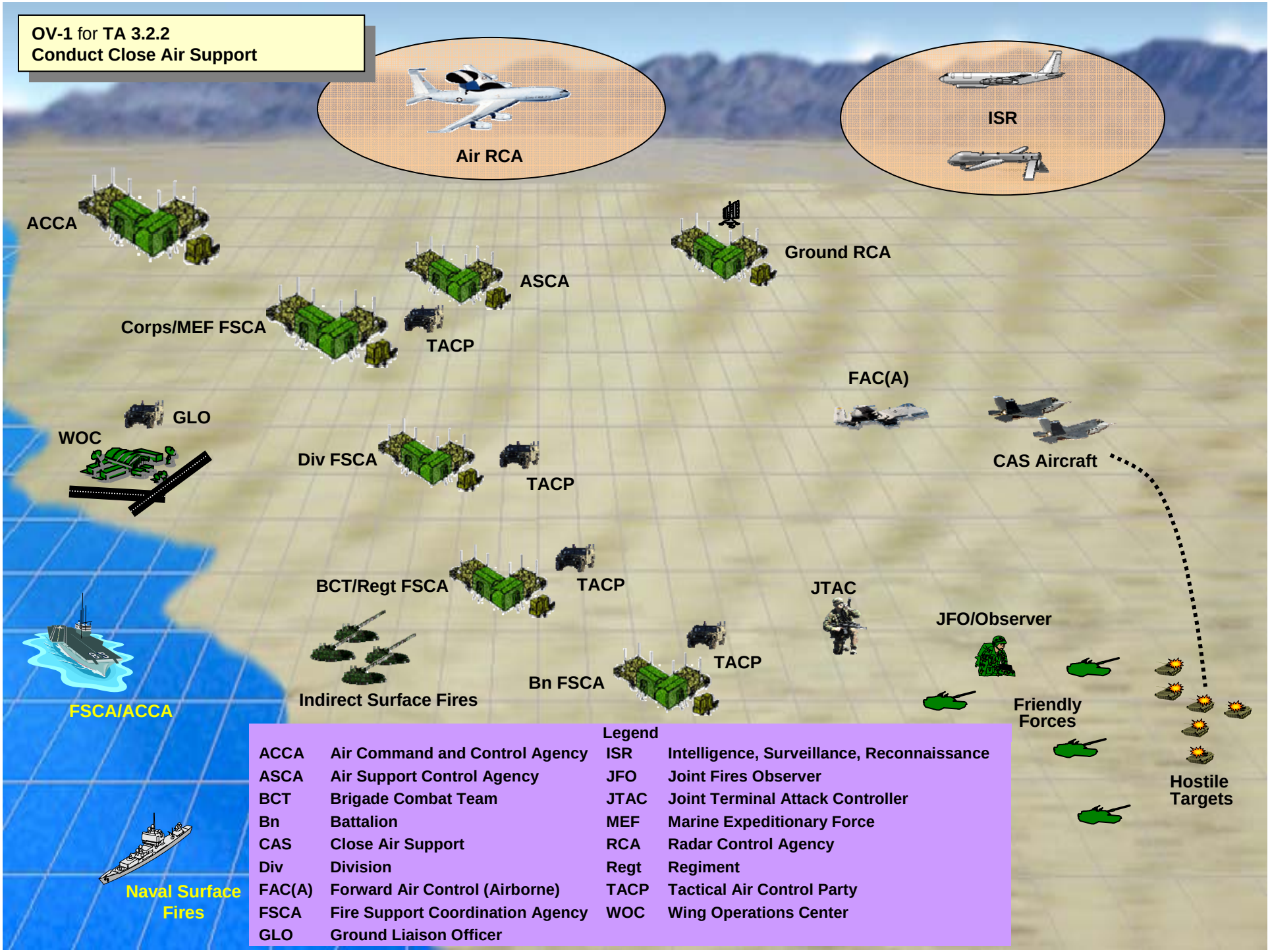
OPERATIONAL VIEW (OV) – 1

HIGH LEVEL OPERATIONAL

CONCEPT DIAGRAM

A graphical depiction of the high-level task and key operational nodes. Supporting text describes key aspects of operations.

The graphic includes several generic terms to describe specific agencies to minimize the use of Service-unique organizations and focus at the joint level on the actual functions they perform. The generic terms include Air Command and Control Agency (ACCA), Air Support Control Agency (ASCA), Fire Support Control Agency (FSCA) and Radar Control Agency (RCA). The terms are included in the accompanying graphic legend and described in the supporting text.



Legend			
ACCA	Air Command and Control Agency	ISR	Intelligence, Surveillance, Reconnaissance
ASCA	Air Support Control Agency	JFO	Joint Fires Observer
BCT	Brigade Combat Team	JTAC	Joint Terminal Attack Controller
Bn	Battalion	MEF	Marine Expeditionary Force
CAS	Close Air Support	RCA	Radar Control Agency
Div	Division	Regt	Regiment
FAC(A)	Forward Air Control (Airborne)	TACP	Tactical Air Control Party
FSCA	Fire Support Coordination Agency	WOC	Wing Operations Center
GLO	Ground Liaison Officer		

TA 3.2.2, Conduct Close Air Support, OV-1 Text

This OV-1describes TA 3.2.2, Conduct Close Air Support, based on the CAS definition as "air action by fixed- and rotary-wing aircraft against hostile targets that are in close proximity to friendly forces and that require detailed integration of each air mission with the fire and movement of those forces." The joint context of this task orients at the tactical level (task OP 3.2.1, Provide CAS integration for Surface Forces, addresses the operational level of the CAS joint task).

Friendly forces in proximity to hostile targets may submit a CAS request, classified as either preplanned or immediate. Preplanned CAS requests include those that the supported unit requires at a predetermined time and location (met by scheduled CAS missions) and those that the supported unit desires to be available during a particular period of time for use, if required, against targets identified at that time (met by on-call CAS missions). Immediate requests for CAS occur from an unforeseen requirement identified by the ground unit outside of the normal CAS planning process. These requests can be met by on-call CAS missions or they may require the diversion or rescheduling of air assets. Key CAS nodes, depicted in the previous graphic, are described below:

• **Joint Terminal Attack Controller (JTAC):** includes USAF terminal attack controllers, USMC Forward Air Controllers (FAC)/JTACs and JTAC-qualified Special Operations Forces (SOF). JTACs control CAS aircraft and coordinate with Joint Forward Observers (JFO), Observers, FAC(A) aircraft, and Tactical Air Control Parties (TACP).

• **Fire Support Coordination Agency (FSCA):** includes the Army Fire Support Element (FSE), USMC Fire Support Coordination Center (FSCC), and Navy Supporting Arms Coordination Center (SACC). These agencies work with USAF or USMC TACPs to provide fire support planning, coordination, integration, and synchronization of fires delivered on surface targets by CAS, indirect surface fires, naval surface fires, and other fire-support assets under the control, or in support, of the unit.

• **Air Support Control Agency (ASCA):** consists of the USAF Air Support Operations Center (ASOC), USMC Direct Air Support Center (DASC) or Special Operations Joint Air Coordination Element (JACE). The ASCA is collocated with the senior maneuver headquarters, processes immediate requests for CAS and coordinates the execution of CAS.

• **Wing Operations Center (WOC):** provides C2 of air units and ensures sorties are generated to accomplish CAS missions as directed by the Air Tasking Order (ATO). The Ground Liaison Officer (GLO) supports the WOC with information updates regarding supported ground commander intent and related ground missions.

• **Radar Control Agency (RCA):** includes the USAF Control and Reporting Center (CRC)/USMC Tactical Air Operations Center (TAOC) on the ground, extended in the air by the USAF E3-A and Navy E2-C airborne warning and control. These agencies provide safe passage, radar control and surveillance for all aircraft within the operational area.

• **ISR:** includes operational elements, such as the Joint Surveillance Target Attack Radar System (JSTARS), as well as organic elements at the tactical level, such as Unmanned Aircraft Systems (UAS), and Non Traditional ISR (NTISR) from FAC(A)/CAS. These entities provide support to maneuver force commanders, JFO/observers and JTACs.

• **Air Command and Control Agency (ACCA):** consists of the USAF Air and Space Operations Center (AOC), USMC Tactical Air Command Center (TACC) or Navy Tactical Air Control Center (TACC). The ACCA is not the focus of TA 3.2.2, but is displayed to provide an operational level of context. It provides integration, coordination, and direction of Joint and Combined air operations; addresses the CAS distribution decision; publishes the ATO with scheduled/on-call CAS missions to fill preplanned CAS requests.

TA 3.2.2, Conduct CAS
Building the OV-5

Nodes	Phases			
	Plan	Prepare	Execute	Assess
JTAC	X	X	X	X
CAS Aircrew	X		X	X
FAC(A)	X		X	X
JFO/Observer	X	X	X	X
TACP	X	X	X	
FSCA	X	X	X	X
ASCA	X		X	
GLO	X			
RCA			X	

TA 3.2.2, Conduct CAS
Building the OV-5

JTAC

	Activity
Plan	**Conduct Planning**
Prepare	**Conduct Rehearsal**
Execute	**Coordinate with TACP/TOC/ASCA**
	Find/Fix/Track Target
	Coordinate with FAC(A)/CAS Aircrew
	Control CAS
Assess	**Conduct BDA**

Sub-Activity: Type 2 Control

- **JTAC send CAS briefing**
- **CAS aircrew verify target coordinates correlate expected target area**
- **CAS aircrew read-back or confirm digitally Line 4 (elev), Line 6 (target location) and any restrictions**
- **CAS aircrew provide IP INBOUND call**
- **CAS aircrew provide an IN call indicating maneuvering for a targeting solution**
- **JTAC provide CLEARED HOT or ABORT**

TA 3.2.2, Conduct CAS
Building the OV-5

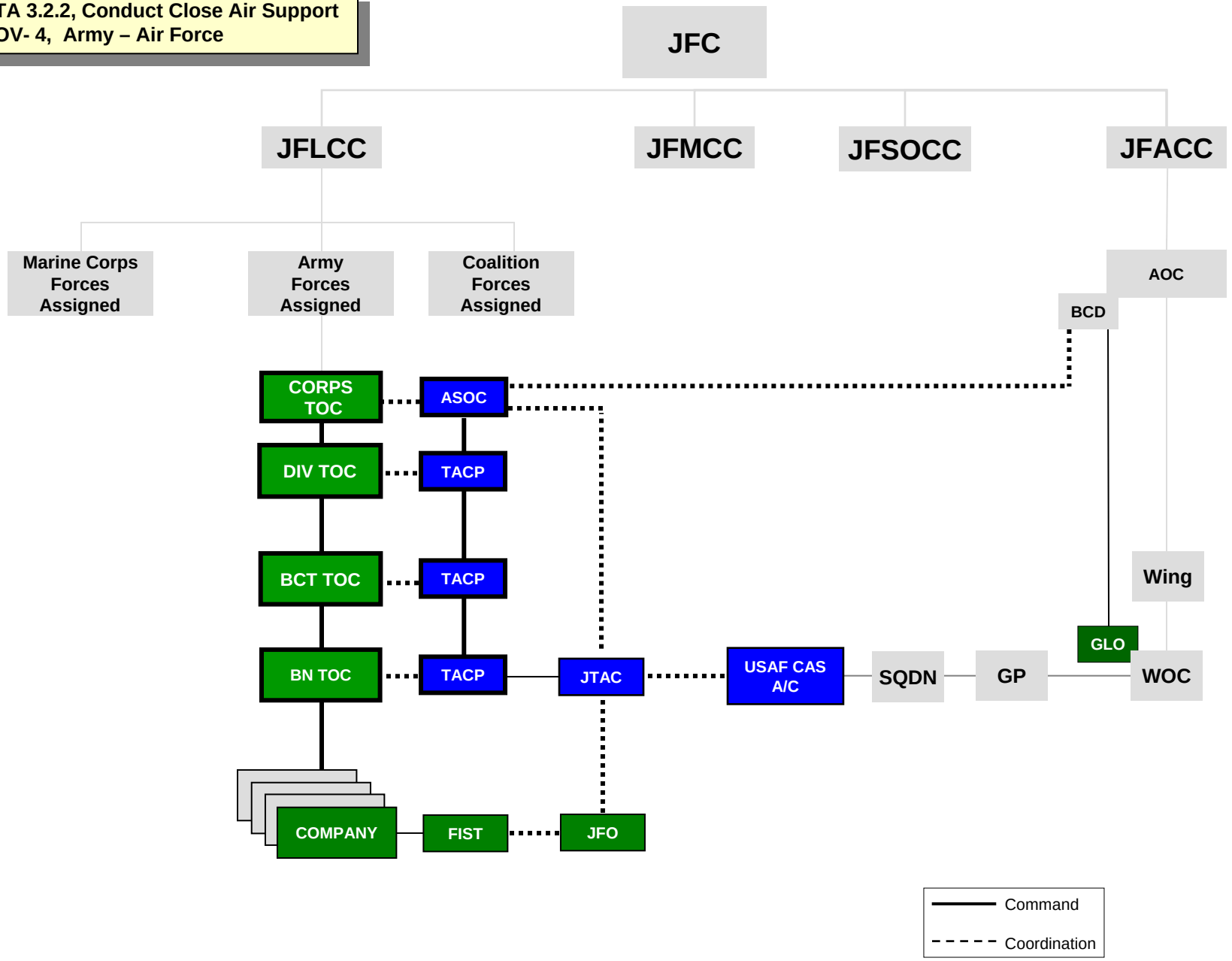
FSCA

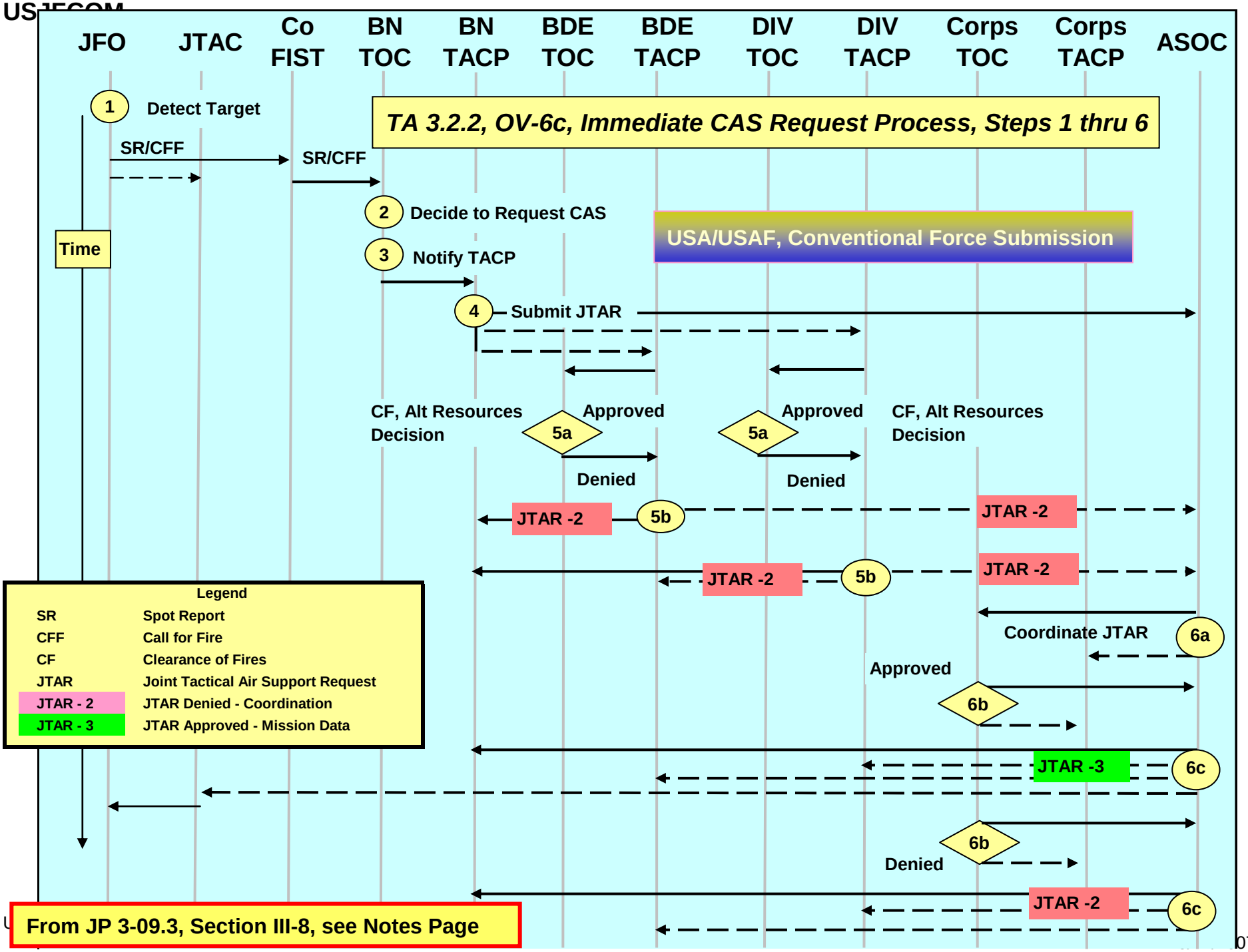
	Activity	
Plan	**Conduct Planning**	**Sub-Activity**
Prepare	**Conduct Rehearsal**	Receive Mission
Execute	**Integrate CAS with ground mission**	Analyze Mission
Assess	**Conduct BDA**	Develop COAs
		Analyze COAs
		Produce Orders

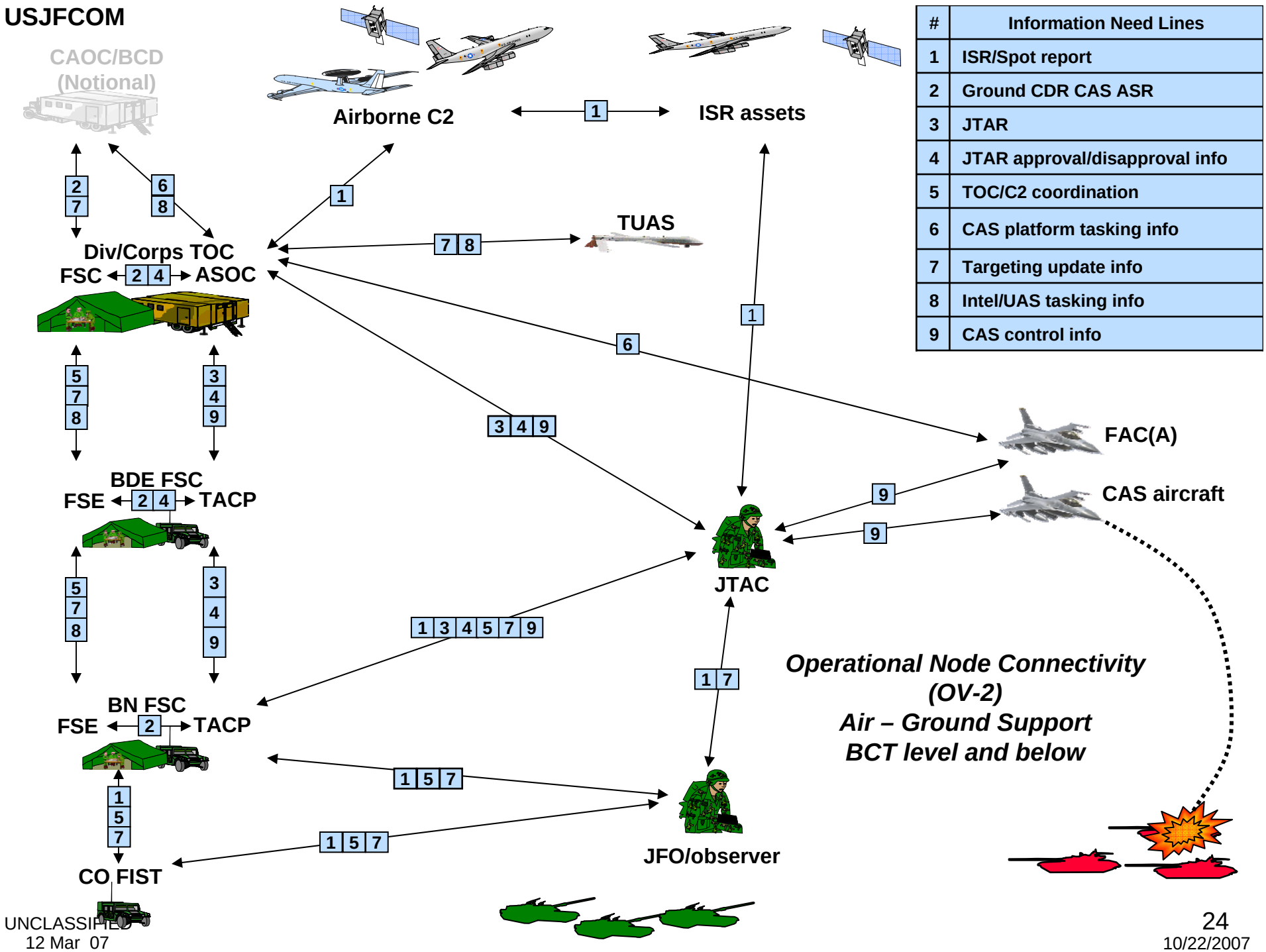
TA 3.2.2 Conduct CAS OV-5

A.0 Conduct CAS	A1 Plan	A1.1 JTAC	A1.1.1 Conduct Planning
		A1.2 CAS Aircrew	A1.2.1 Receive information updates from the GLO regarding supported ground commander intent and related ground missions
		A1.3 FAC(A)	A1.3.1 Conduct Planning
		A1.4 JFO/Observer	A1.4.1 Conduct Planning
		A1.5 TACP	A1.5.1 Conduct Planning
		A1.6 FSCA	A1.6.1 Conduct Planning
		A1.7 ASCA	A1.7.1 Conduct Planning
		A1.8 GLO	A1.8.1 Provide information updates to FAC(A)/CAS Aircrew regarding supported ground commander intent and related ground missions
	A2 Prepare	A2.1 JTAC	A2.1.1 Conduct Rehearsal
		A2.2 JFO/Observer	A2.2.1 Conduct Rehearsal
		A2.3 TACP	A2.3.1 Conduct Rehearsal
		A2.4 FSCA	A2.4.1 Conduct Rehearsal
	A3 Execute	A3.1 JTAC	A3.1.1 Coordinate with TACP/TOC/ASCA
			A3.1.2 Find/Fix/Track Target
			A3.1.3 Coordinate with FAC(A)/CAS Aircrew
			A3.1.4 Control CAS
		A3.2 CAS Aircrew	A3.2.1 Coordinate with WOC/ACCA/ASCA/ACA
			A3.2.2 Coordinate with JTAC
			A3.2.3 Provide CAS
		A3.3 FAC(A)	A3.3.1 Coordinate with TACP/TOC/ASCA
			A3.3.2 Find/Fix/Track Target
			A3.3.3 Coordinate with JTAC/CAS Aircrew
			A3.3.4 Control CAS
		A3.4 JFO/Observer	A3.4.1 Find/Fix/Track Target
			A3.4.2 Coordinate with JTAC/TACP/TOC
		A3.5 TACP	A3.5.1 Coordinate with TOC
			A3.5.2 Coordinate with Other TACP/ASCA
			A3.5.3 Coordinate with JTAC
		A3.6 FSCA	A3.6.1 Integrate CAS with ground mission
		A3.7 ASCA	A3.7.1 Provide procedural control of CAS assets within supported GND CDR AO
			A3.7.2 Processe CAS requests
			A3.7.3 Control flow of CAS aircraft in and out of supported GND CDR AO
			A3.7.4 Integrate aircraft operating inside the FSCL using ACM/FSCMs
			A3.7.5 Manage JARN and allocated TAD frequencies
			A3.7.6 Coordinate other mission areas
			A3.7.7 Manage subordinate deployed TACPs
			A3.7.8 Assign and direct CAS aircraft, when authorized, to JTACs
		A3.8 RCA	A3.8.1 Provide Routing/Update Information to FAC(A)/CAS Aircrew
	A4 Assess	A4.1 JTAC	A4.4.1 Conduct BDA
		A4.2 CAS Aircrew	A4.2.1 Conduct BDA
		A4.3 FAC(A)	A4.3.1 Conduct BDA
		A4.4 FSCA	A4.4.1 Conduct BDA

TA 3.2.2, Conduct Close Air Support
OV- 4, Army – Air Force




JFO
JTAC
Co FIST
BN TOC
BN TACP
BDE TOC
BDE TACP
DIV TOC
DIV TACP
Corps TOC
Corps TACP
ASOC
TA 3.2.2, OV-6c, Immediate CAS Request Process, Steps 1 thru 6
USA/USAF, Conventional Force Submission
Time
1 Detect Target
SR/CFF
SR/CFF
2 Decide to Request CAS
3 Notify TACP
4 Submit JTAR
CF, Alt Resources Decision
Approved
5a
Denied
Approved
5a
Denied
CF, Alt Resources Decision
JTAR -2
5b
JTAR -2
JTAR -2
5b
JTAR -2
Coordinate JTAR
6a
Approved
6b
JTAR -3
6c
6b
Denied
JTAR -2
6c
Legend
SR Spot Report
CFF Call for Fire
CF Clearance of Fires
JTAR Joint Tactical Air Support Request
JTAR - 2 JTAR Denied - Coordination
JTAR - 3 JTAR Approved - Mission Data
From JP 3-09.3, Section III-8, see Notes Page



#	Information Need Lines
1	ISR/Spot report
2	Ground CDR CAS ASR
3	JTAR
4	JTAR approval/disapproval info
5	TOC/C2 coordination
6	CAS platform tasking info
7	Targeting update info
8	Intel/UAS tasking info
9	CAS control info

TA 3.2.2, Conduct CAS, OV-3

Table 6-2 summarizes IERs for Events 2 and 3. The IERs are indexed to Steps 1 through 10 identified in the OV-5 in Table 14, information needlines 1through 8 (needline number) specified in the OV-2 in Figure 9, as well as selected IER numbers between 308 and 371 from the CAS MA-ICD. Refer to Appendix D of the CAS MA-ICD for additional details related to specific IER numbers. This list may be refined by event managers to accomplish assessment objectives.

Step No.	NL No.	IER No.	Activity/Information Element Description	Sending Node	Receiving Node	Timeliness Criteria[1]	Event
1	1	308	JFO detects target resulting in spot report to maneuver commander	JFO	Maneuvering commander	M5	3
2	2	308	Maneuver commander decides to request CAS	Maneuver commander	FSE/FSCC	M5	3
2	5	309	FSE/FSCC determines fire support available for SEAD; coordinates with ASOC/DASC	FSE/FSCC	ASOC/ DASC, JFO	M5	3

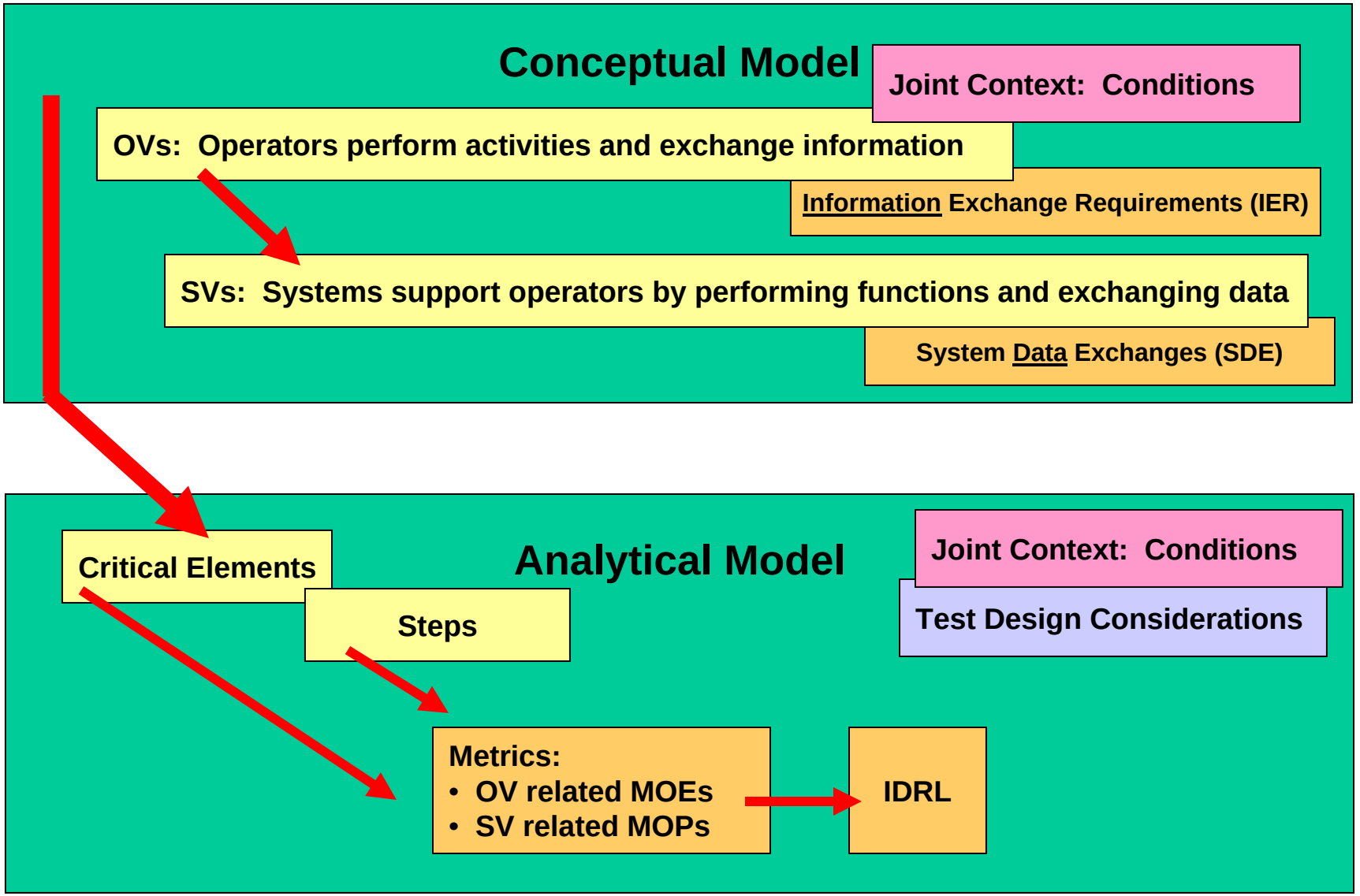
Need work on both the columns and the rows

OV-2 Needlines

OV-5 Activities/Sub-Activities

Excerpts from JBMC2 Campaign Plan, Annex A JCAS

Sample Assessment Structure



Sample Assessment Structure

JTAC

	Activity
Plan	Conduct Planning
Prepare	Conduct Rehearsal
Execute	Coordinate with TACP/TOC/ASCA
	Find/Fix/Track Target
	Coordinate with FAC(A)/CAS Aircrew
	Control CAS
Assess	Conduct BDA

Critical Element

Steps

Sub-Activity: Type 2 Control

- JTAC send CAS briefing
- CAS aircrew verify target coordinates correlate expected target area
- CAS aircrew read-back or confirm digitally Line 4 (elev), Line 6 (target location) and any restrictions
- CAS aircrew provide IP INBOUND call
- CAS aircrew provide an IN call indicating maneuvering for a targeting solution
- JTAC provide CLEARED HOT or ABORT

Sample Assessment Structure

Type 2 Control Steps

- JTAC send CAS briefing
- CAS aircrew verify target coordinates correlate with expected target area
- CAS aircrew read-back or confirm digitally Line 4 (elev), Line 6 (target location) and any restrictions
- CAS aircrew provide IP INBOUND call
- CAS aircrew provide an IN call indicating maneuvering for a targeting solution
- JTAC provide CLEARED HOT or ABORT

Measures of Effectiveness (MOE)

- Percent of controls where the JTAC sent a 9-line
- Average time for CAS aircrew to verify target coordinates
- Percent of controls where the JTAC provided CLEARED HOT
- Percent of controls effectively managed by the JTAC
- ...

Integrated Data Requirements List (IDRL) for Each Control

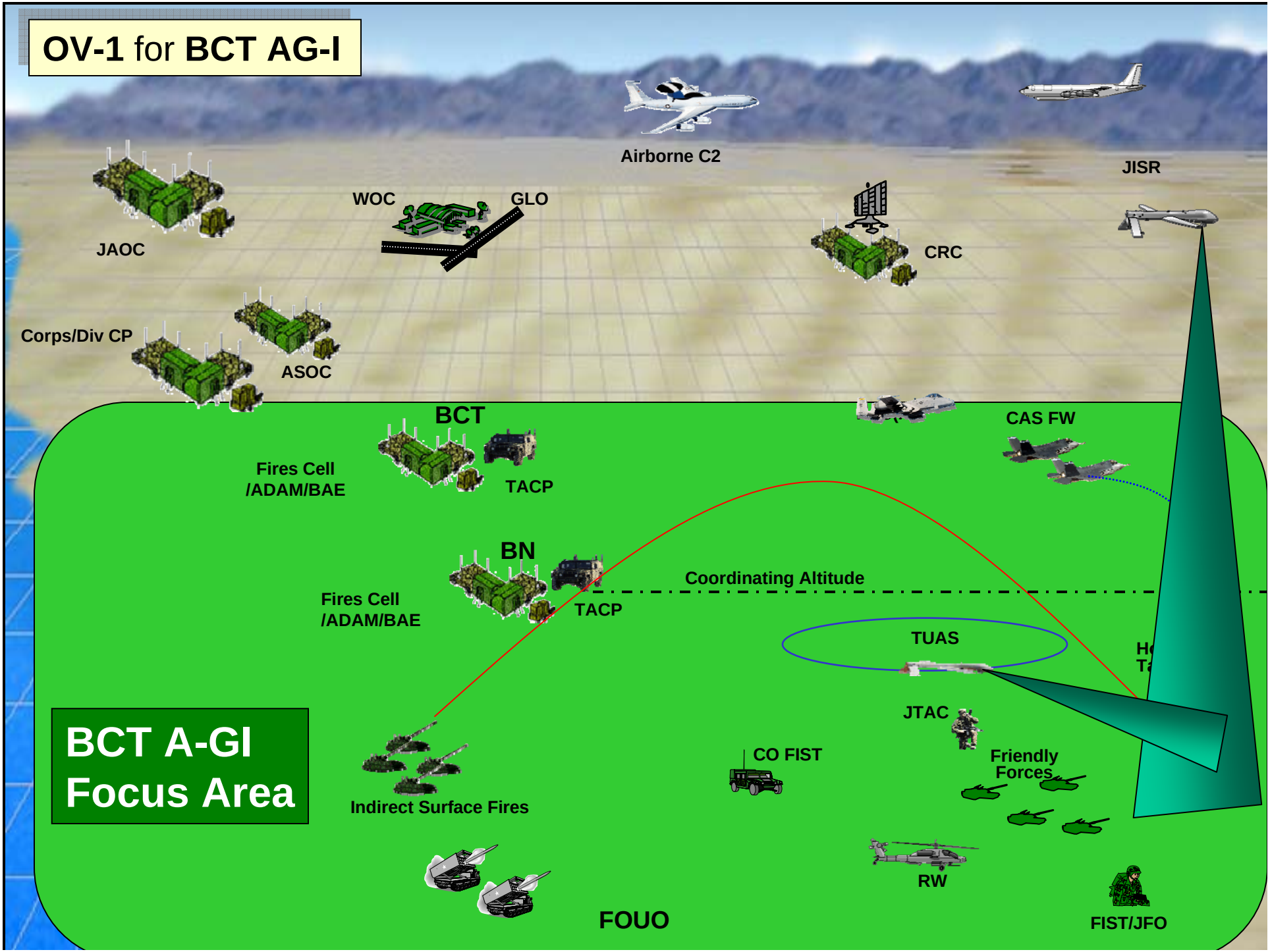
- Did the JTAC send a 9-line?
- Time that JTAC completed the 9-line
- Time that CAS aircrew verified target coordinates
- Did the JTAC provide CLEARED HOT?
- Did the CAS aircraft engage the correct target?
- ...

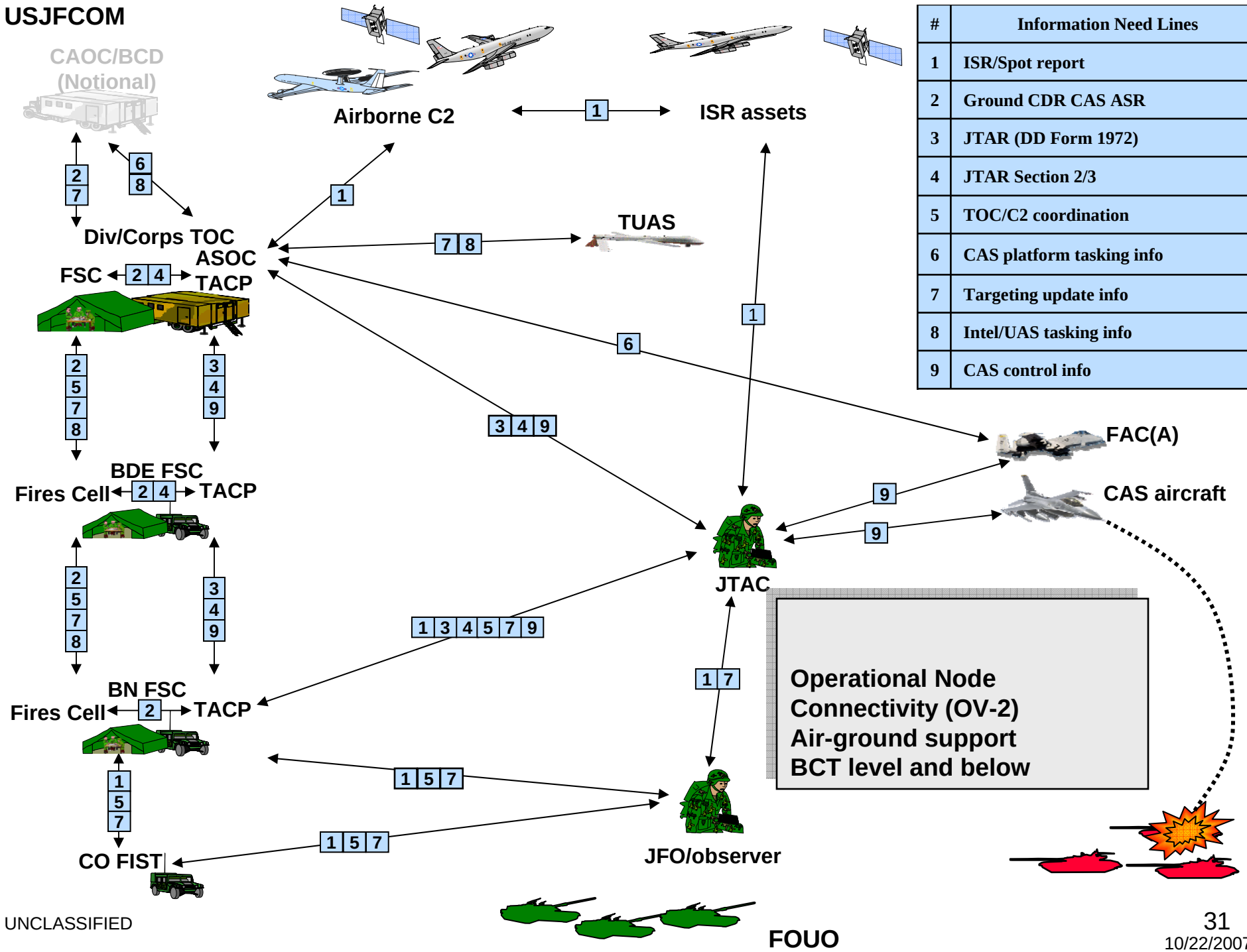
Conceptual Model, Metrics and IDRL can grow iteratively with input/feedback from exercises, lessons learned, etc.

Following slides show use of universal joint tasks in support of JFIIT assessments

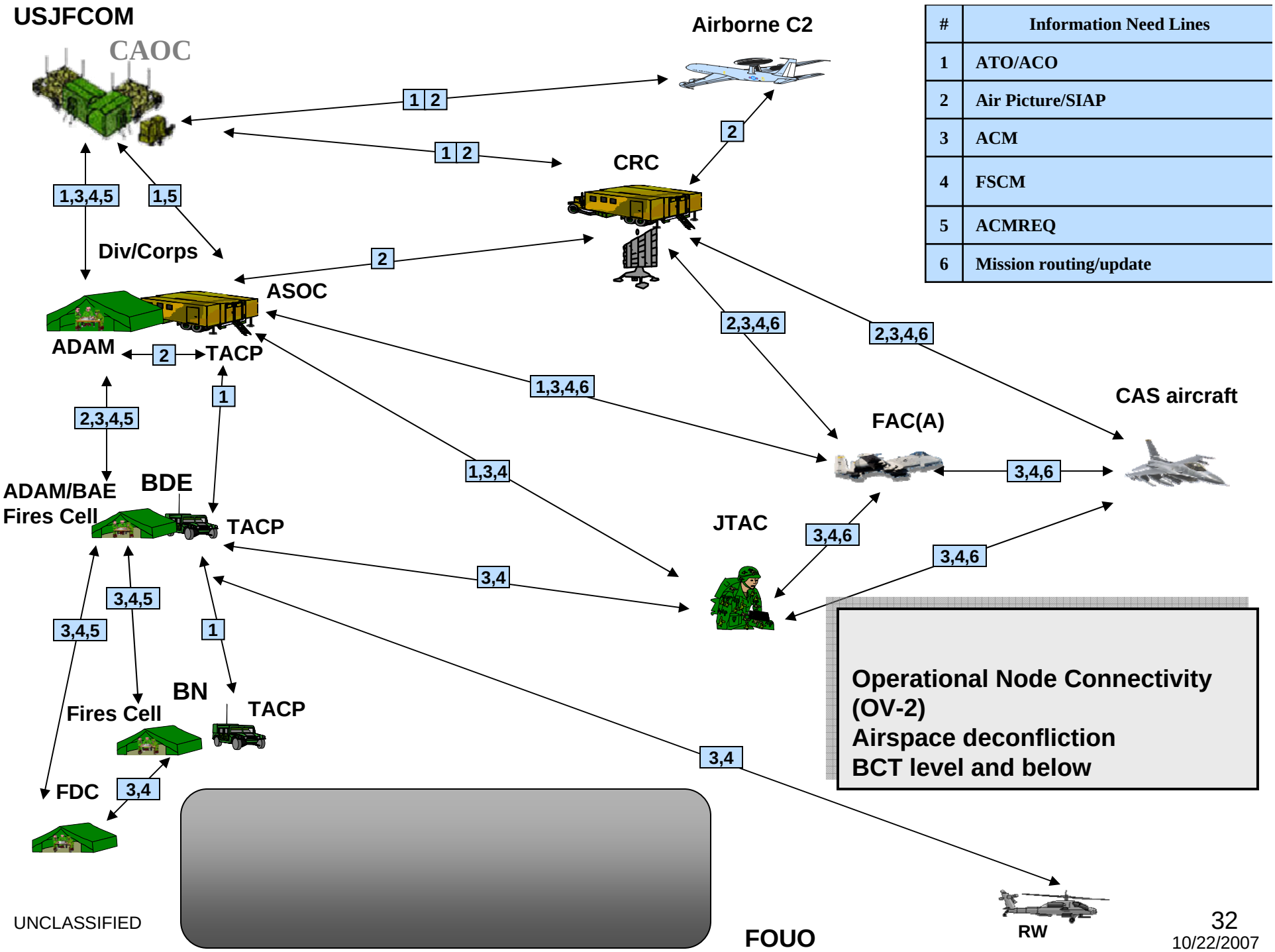
Following slides from JFIIT Project (Air-Ground Integration)

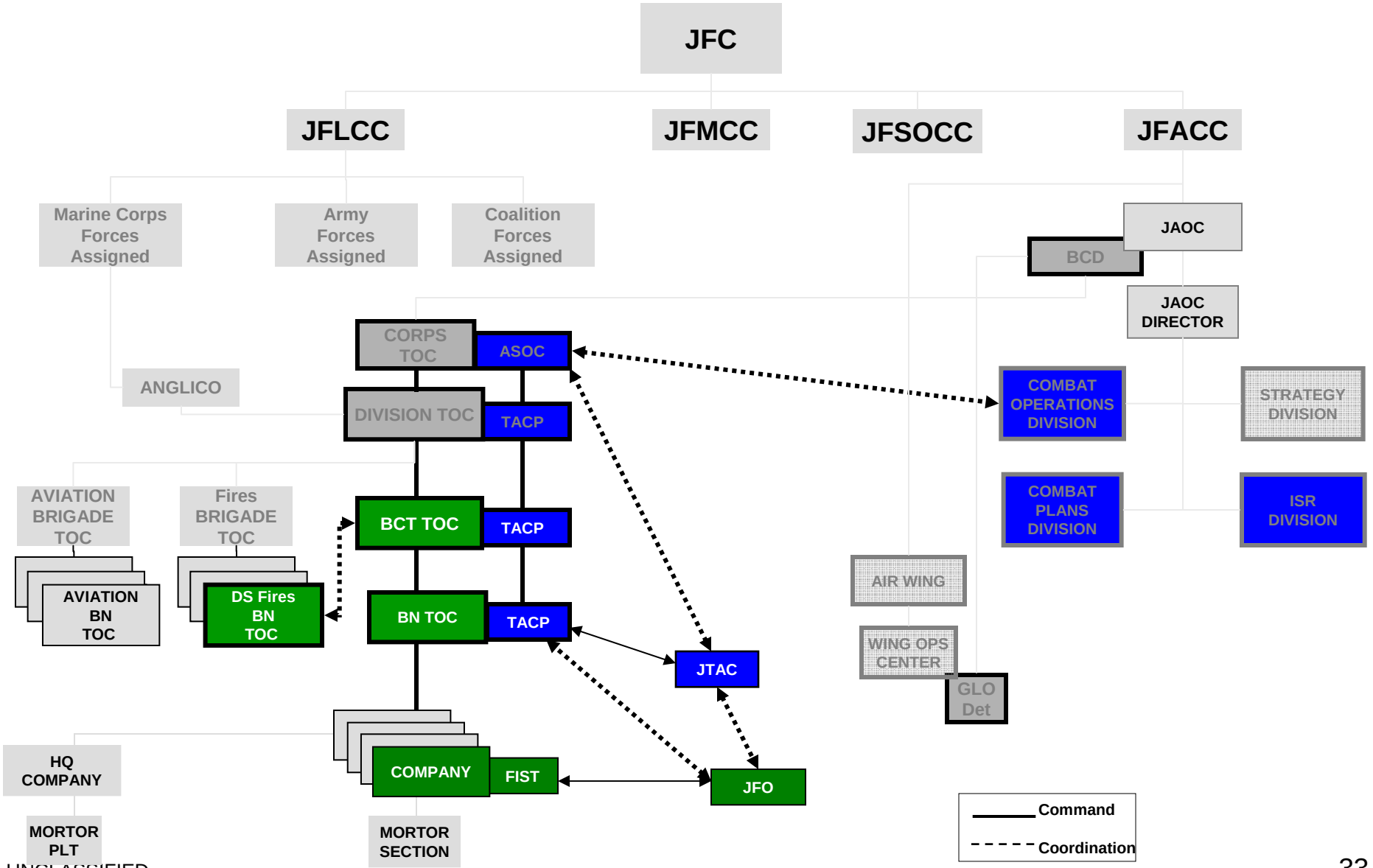
Demonstrates use of more than one task to establish the necessary framework (context) for address of a joint training or capability Issue (requirement)


OV-1 for BCT AG-I
Airborne C2
JISR
WOC
GLO
JAOC
CRC
Corps/Div CP
ASOC
BCT
CAS FW
Fires Cell
/ADAM/BAE
TACP
BN
Coordinating Altitude
Fires Cell
/ADAM/BAE
TACP
TUAS
JTAC
BCT A-GI
Focus Area
CO FIST
Friendly
Forces
Indirect Surface Fires
RW
FIST/JFO
FOUO



#	Information Need Lines
1	ISR/Spot report
2	Ground CDR CAS ASR
3	JTAR (DD Form 1972)
4	JTAR Section 2/3
5	TOC/C2 coordination
6	CAS platform tasking info
7	Targeting update info
8	Intel/UAS tasking info
9	CAS control info



#	Information Need Lines
1	ATO/ACO
2	Air Picture/SIAP
3	ACM
4	FSCM
5	ACMREQ
6	Mission routing/update

BCT A-GI Organizational Relationships (OV-4)